

response to the Final Action and the supplemental response filed January 31, 2003, in response to the Advisory Action, applicant refuted the Examiner's argument and maintained that the feature of the claims that the film transmits light under light irradiation (or heating) and blocks light without light irradiation (or heating) distinguishes the invention over the cited prior art. In the outstanding Action, the Examiner does not repeat the same rejection as the previous Actions and does not respond to the argument set forth by applicant in the previous responses. This is a concession by the Examiner that the light transmitting and blocking feature of the claims is a positive limitation that can be applied to distinguish the invention from the prior art.

Gasser's laser diode extends its use period by forming a passivation layer in-situ on the mirror facets directly after the formation of the facets in vacuum. The Examiner contends that Gasser's passivation layer inherently possesses the light transmitting and blocking feature of the claimed thin film because Gasser's passivation layer may be made of antimony, which is described as one of the candidates for forming the claimed thin film in the specification. Applicant respectfully disagrees.

As the Examiner concedes by not responding to applicant's arguments in the previous responses, the feature of claim 1 that the film transmits light under light irradiation and blocks light without light irradiation is a positive claim limitation. To produce this structure the design parameters of the thin film, such as the melting point, the film thickness and the irradiation power must be tailored to achieve the claimed feature, as explained in the amendment filed December 20, 2002. On the other hand, Gasser's passivation layer is a protection film protecting the light emitting edge of the laser diode cavity. Because the passivation layer covers the light emitting edge of Gasser's laser diode, Gasser's passivation layer must be light transmitting. No portion of Gasser teaches or suggests that Gasser's passivation layer may be modified to block

light when the film is not irradiated. Absent such a teaching, persons of ordinary skill in the art would have understood that Gasser's passivation layer does not block light at any time during the use of the device. Furthermore, persons of ordinary skill in the art would not have been motivated to modify the design parameters of Gasser's passivation layer to arrive at the claimed invention because there is no need for a laser diode to have a passivation layer that blocks light when it is not irradiated.

Accordingly, Gasser does not teach or suggest the light transmitting and blocking feature of claim 1. Claim 9 also recites a similar feature that the thin film transmits light when it is heated and blocks light when not heated. Gasser does not teach or suggest this feature either. Thus, the rejection of claims 1-3, 7-11 and 15-17 should be withdrawn.


The remaining rejection relies on Gasser. This rejection should be withdrawn as well because Gasser does not provide the teachings for which it is cited.

In light of the above, a Notice of Allowance is solicited.

In the event that the transmittal letter is separated from this document and the Patent and Trademark Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952**, referencing Docket No. **325772017700**.

Respectfully submitted,

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